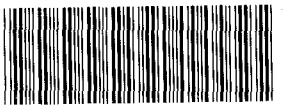
Lee

DOE F 1325.8

United States Government | Department of Energy

memorandum

Rocky Flats Office



00001592?

DATE: FEB 23 1993

REPLY TO ATTN OF: ERD:SH:02331

SUBJECT: Transmittal of Final Comments on Building 910 Health and Safety Plan

TO: Ed Lee, Program Manager
Solar Ponds Remediation
EG&G Rocky Flats, Inc.

Attached please find the final comments to the Building 910 Health and Safety Plan (HASP) agreed upon in the February 17, 1993, joint DOE/HQ, RFO and EG&G HASP Comment Resolution Meeting. In support of the desire to begin the revision of this document as quickly as possible, RFO at this time is forwarding the unedited pages of comments and comment resolutions generated during the 2/17/93 meeting. As soon as the final version of these comments become available, they will be transmitted to EG&G.

It is expected that DOE/HQ, EM-45 and EM-23, will shortly grant conditional approval of this HASP based upon the incorporation of the comments provided. The EG&G groups responsible for the revision of this document were tasked at the conclusion of the 2/17/93 meeting to develop an estimate of the technical support required to revise the document as well as an estimate of the schedule to complete this effort. This estimate is expected to be completed by 2/23/93. This schedule estimate will be included in the conditional approval issued by DOE/HQ.

It is imperative that EG&G adhere to the commitment made by the Manager of EG&G Rocky Flats, Inc. to DOE/HQ EM-1 to increase the efficiency of operations at Rocky Flats. The schedule commitments for this document can only be met by ensuring the following:

1) Assignment of the requisite priority and commensurate resources to both the completion of the HASP revision and the ultimate submittal of the final document to RFO.

2) Improvement of the efficiency of the EG&G review and approval process for this HASP. This process has and continues to be a "bottleneck" at Rocky Flats, holding many initiatives hostage. The streamlining of this process through the practicing of more efficient review protocols and by the elimination of organizations from the review process who add no value will be required if the schedule date is to be met.

Attachment

ADMIN RECORD

If there are any questions please contact Frazer Lockhart at extension 7846 or Steve Howard at extension 3040.

Frazer R. Lockhart
SPRP Manager
Environmental Restoration Division

Attachment

cc w/ Attachment:
D. Ringle, EG&G
P. Stephens, EG&G
A. Hohl, EG&G

cc w/o Attachment:
R. Harris, EM-453
S. Howard, SMS, RFO
R. Benedetti, EG&G

TECHNICAL REVIEW OF
FINAL HEALTH AND SAFETY PLAN FOR ROCKY FLATS, BUILDING 910

INTRODUCTION

The Occupational Safety and Health Administration (OSHA) requires that a site-specific Health and Safety Plan (HASP) be developed and implemented for each site where workers are potentially exposed to hazardous substances. This requirement is applicable to operations involving hazardous wastes that are conducted at treatment, storage, and disposal (TSD) facilities such as Building 910.

GENERAL COMMENTS

This HASP was reviewed against OSHA requirements, the Environmental Protection Agency (EPA) recommendations, and sound professional practices. Overall, this document is lacking the detail required for a site-specific HASP. The following comments specify the information that should be added to the Building 910 HASP.

SPECIFIC COMMENTS

Section 1.1, Page 8

The plan references Building 910's capability to accept aqueous waste from the solar ponds "in an emergency situation". These "emergency situations" should be defined.

Building 910 has the capability to accept solar pond water not only in an emergency situation. The language will be changed to delete the emergency reference.

Responsible:Steve Howard Accepted By:Brendan Burns
Date: / /93

Section 1.1, Page 9

The last paragraph of Section 1.1 discusses hazards in the building, but does not discuss accidents. It is recommended that a discussion of potential accidents be included in this section.

Language on accident types and consequenes will be summarized in the HASP from language from the SAR. Only a few sentences are required on the level of the workers.

Responsible:Steve Howard Accepted By:Brendan Burns
Completion Date: / /93

Page 10, Section 1.1.2

This section states that the emergency showers and eye wash are located in the Chemical Preparation/makeup Room. Suitable facilities for quick drenching or flushing of the eyes and body should be provided within each work area, for immediate emergency use, where the eyes or body may be exposed to injurious corrosive materials. If this is not the only area where potential exists for hazardous materials to splash or spill on workers, additional emergency shower and eye wash stations should be installed and referenced.

It is scheduled to add eye washes and showers to Building 910, this information must be updated in the HASP. The writers of the HASP must inform the SAR writers of the updated information. A floor plan indicating all emergency equipment and exits will be added to the HASP. The emergency shower and the eye wash located outside near the nitric acid tank may either not be required or may need to be altered to heat the pipes to avoid freezing this must be looked into by EG&G.

Responsible: Steve Howard Accepted By: Brendan Burns
Completion Date: / /93

Pages 13-4, Section 1.4

The plan delineates equal health and safety responsibilities to both the Liquid Waste Treatment Operations (LWTO) - Operations Manager and Assistant Operations Manager. There is no specific designation of a Site Health and Safety Officer (SHSO) and an alternate. HASPs should include the names and emergency telephone numbers of all key personnel and alternates responsible for site health and safety. It is recommended that the LWTO Operations Manager be designated as the SHSO, having full responsibility for employee health and safety, and the Assistant Operations Manager be designated the alternate SHSO, if so appropriate.

Designate the SHSO and their alternate, and identify the names, phone numbers of these people. Those personnel identified will be located within Building 910. The sense of responsibility and accountability for worker safety must be included in the responsiblities of the Operations Manager. These changes will be made in the HASP.

Responsible:_____ Accepted By:_____
Completion Date: / /93

Page 14, Section 1.4.2

The listing of responsibilities for the Assistant Operations Manager contains a repeated duty, number 9, maintain responsibility for all personnel assigned to Building 910 when an emergency occurs. This sentence should be deleted.

This sentence will be deleted.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 2.1, Pages 19-21

The requirements of a medical surveillance program are summarized in this section of the HASP. In addition, the LWTO Operations Manager, Industrial Safety and Industrial Hygiene, and the Occupational Health Director have been charged with various medical surveillance responsibilities. It is felt that the Building 910 medical surveillance requirements could be tightened to ensure effective implementation. Specifically, their should be discussion as to who this program applies to (e.g., subcontractor personnel). Building 910 job titles required to participate in the program should be specified. The Occupational Health Director should be required to inform the employee and the supervisor when an examination is required and when a scheduled examination is missed. In addition, the term "qualification" should be defined to whether it refers to the "general site worker and supervisor" or to the thirty day exposure or respirator wear requirement.

Any specific medical surveillance requirements for Building 910 personnel will be identified. Verify what special requirements may be required for subcontractors also. Noise levels will need to be checked to determine whether or not hearing conservation is requied.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 2.2, Pages 21-22

This section defines various training requirements for employees, but fails to state where training documentation is available. In addition, various managers are tasked to "ensure that employees have met all training requirements, however, procedures on how to complete this task are not provided.

Language clarifying the location of training records and the procedures for notification of required refresher training and delinquency will be added to the HASP.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 3.1,Pages 23-25

This section identifies many worker hazards. It is not clear, however, that hazards from chemicals, lock and tag requirements, controlled entry requirements, nearby equipment and facilities, and the consequences of equipment and human failures have been adequately considered. Moreover, it is not clear whether operating procedures have been reviewed to minimize hazards to workers. Workers must be trained to follow those work practices that avoid hazards.

The general Safety and Health Hazards will be upgraded to include details of the specific chemicals hazards, lock out tag out, and confined space. The policy regarding procedural reviews will be stated, to include who participates in the review process, so that the worker understands that his safety has been considered.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 29, Section 3.2.3.4, Safety and Health Hazard Assessment

The hazards associated with the brine in the Process Room and the lower level of Building 910 include inhalation of airborne dust. The HASP indicates that proper spill clean-up, housekeeping, and personal protective equipment (PPE) use, will minimize this hazard. There is no reference to the use of respiratory protection to be used in the case of exposure to hazardous dust levels, or of air sampling that may indicate that respiratory protection is not required. It is recommended that Section 4.3, Personnel Protective Equipment be revised to include specific language regarding what PPE is required under what circumstances and in the case of increased levels of contaminants.

In addition, this section should include the frequency of Safety and Health Hazard Assessments and means to ensure correction of findings. If an Employee Recommendation Program exists for this facility it should be referenced here.

The reference to the inhalation hazard will be clarified and removed if appropriate. There should be no brine dust in the Building 910 operations. Should this change it will be incorporated in the HASP at a later date. Verify what procedures will be required for maintenance procedures, and what PPE may be required during these procedures.

Language will be added to clarify that References to Rocky Flats programs for assessments must be made including frequency and corrective actions.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 30, Section 4, Hazardous Material Handling

This section of the HASP states that the safety and health of personnel is dependent on strict adherence to procedures defined in the Rocky Flats Plant Health and Safety Practices Manual and this HASP. There is no reference to the availability of this manual for review by workers in Building 910. Those specific work practices and standard operating procedures (SOPs) that are relevant to activities in Building 910 should be contained in the HASP and be referenced to each specific task.

Specific procedures for activities in Building 910 will be referenced. Rocky Flats' Health and Safety Practices Manual will be referenced as site policy and will be shown as a reference for the development of the SOPs.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 31, Section 4.3, Personal Protective Equipment

This section does not reference a written Personal Protection Equipment (PPE) Program. OSHA requires that site-specific safety and health plans include details of a written PPE Program that addresses the following elements:

- PPE selection based upon site hazards
- PPE use and limitations of the equipment
- Work mission duration
- PPE maintenance and storage
- PPE decontamination and disposal

- PPE training and proper fitting
- PPE donning and doffing procedures
- PPE inspection procedures prior to, during, and after use
- PPE Program evaluation
- PPE limitations during temperature extremes, heat stress, or other medical considerations.

The above-mentioned information should be included in the Building 910, HASP. If such a written program does exist, it may be attached to the plan to fulfill this requirement.

The PPE program will be referenced and will cover all the OSHA required sections.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 31, Section 5.1, Safety and Health Hazard Control - Physical Hazards

The HASP states that work in elevated areas, which could cause serious injuries through falls, is required in the Process Room of Building 910. Although work in high locations has been identified as a potential hazard, no means of hazard control (e.g., administrative controls, engineering controls, or PPE) to protect personnel from falls is discussed in the HASP. Work practices, SOPs, or controls related to working in elevated areas, as well as all other procedures reflecting specific hazards related to work in Building 910, should be specifically referenced in this section.

Procedures are being written to identify and control hazards related to working in elevated areas.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 33, Section 5.2.2, Engineering Controls

This section states that alarmed chemical detection instruments are used in Building

910 "to detect chemical releases whenever the contamination concentration warrants." This statement is unclear. Section 5.2.2 should be revised to include specific information pertaining to this instrumentation, such as, contaminants detected, detection limits, locations and frequency of monitoring, type of instrumentation, and maintenance and calibration methods.

This statement will be clarified. The existence of leak detection systems will be described with more detail.

Responsible:_____ Accepted By:_____
Completion Date: / /93

Page 34, Section 5.2.4, Decontamination

This section states that "decontamination of equipment and personnel will be performed as necessary" as well as several other general statements regarding decontamination. A Decontamination Plan, specific to Building 910, is required to ensure that chosen decontamination methods are effective for the specific hazardous substances present, and that the methods themselves do not pose any health or safety hazards. Decontamination procedures should be developed that are specific to Building 910 activities. These procedures should:

- Be specific for the type of contaminant, and the material being decontaminated
- Identify the required decontamination equipment and methods
- Indicate the areas designated as decontamination zones
- Discuss work practices designed to prevent contamination of clean areas and to minimize worker contact with contaminants during removal of PPE
- Discuss the disposal methods for decontamination wastes, and clothing and equipment that may not be completely decontaminated
- Identify the need for regular showers and change rooms, as necessary.

Additional language will be added to the HASP decontamination section to identify under what conditions decontaminations procedures are required and that will reference the Decontamination procedures document.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 36, Section 5.5, Confined Space Entry

This section refers to examples of typical confined spaces without specifying the locations of confined spaces in Building 910. For example, the storage tanks for the distillate and the brine on the lower level of Building 910 may constitute a confined space hazard. This section should be revised to include the location of each area defined as a confined space, the procedures for operating in a confined space, under what conditions such work is required in Building 910 (e.g., cleaning tanks), and the name and title of the person who "specifically authorizes" confined space entry.

The confined space locations will located on a floor plan map and how the hazards are managed. Language stating that confined space activities are controlled under EG&G policy will be included. The statement that no routine confined space entry is required in Building 910.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 5.6, Page 38

This section refers to various documents which will provide hazard communication information. Additional data should be added to this section, including: the location of these documents, who will provide the hazard communication information to workers, who will receive the information, and how frequently this information will be disseminated.

The text will be modified to reflect the additional information required.

Responsible:_____Accepted By:_____
Completion Date: / /93

Pages 38-40, Section 6, Monitoring

Section 6 states that activity-specific monitoring is used in Building 910, however, it does not specify the types and frequency of monitoring to actually be conducted. OSHA requires that HASPs discuss a monitoring plan that includes: 1) personnel and environmental monitoring techniques and instrumentation to be used, including methods of maintenance and calibration of equipment, 2) procedures for initial entry monitoring, periodic monitoring, and monitoring of high risk employees, and 3) the specific contaminants to be monitored such as, noise, heat, nitric acid, and chromium, and the frequency of monitoring. It is recommended that Section 6 be revised to include the required information.

Baseline monitoring will be done to determine what routine monitoring will be required, this information will be added to HASP revisions.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 39, Section 6.1

This section states that workers in Building 910 are required to use the buddy system. If all areas of Building 910 do not require the buddy system, those areas that do should be specified. In addition, those procedures defining the implementation and enforcement of this system should be included.

Text will be modified to reflect what procedures require the use of the buddy system. The procedures will be studied to determine the potential use of radios to maintain contact.

Responsible:_____Accepted By:_____
Completion Date: / /93

Table 7-2A, Page 44

This table lists chemicals and radiological hazards. There is no mention, however, of the following hazardous chemicals known to be present at Rocky Flats: beryllium, ammonia, arsenic, cadmium, lead, mercury, as well as other known contaminants of the evaporation

ponds.

The hazardous materials present in the building will be identified in the building to include maintenance type chemicals, and this section will be updated.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 8, Pages 45-51, Emergency Response Plan

Section 8, states that in the event of an emergency, Industrial Hygiene and Radiological Engineering staff shall advise on the type of PPE required. Injuries can be prevented through pre-emergency planning and having emergency PPE available. This section should be expanded to include the types of PPE required in predictable emergency situations.

In addition, this section states that Figure 8-1 provides emergency evacuation routes and locates emergency equipment throughout Building 910. In actuality, this figure only provides emergency phone numbers for the shift supervisors. Section 8 should be revised to contain emergency evacuation routes, a site map indicating emergency equipment, and routes to the nearest medical facilities.

The Emergency Response Plan will be modified to discuss what PPE is required for abnormal conditions, and when evacuation is required. This requires further study to determine the actual procedures.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 8.2, Page 49

The reporting requirements for ingestion or inhalation of liquids or hazardous chemicals are couched in discretionary language in this section. It is recommended that the reporting requirements for Building 910 be expanded into its own subsection.

Procedures will be referenced here regarding reporting requirements. Define who needs to be notified and what actions are required to be followed.

Responsible:_____Accepted By:_____
Completion Date: / /93

Page 52, Section 9

Table 9-1 is referenced as a "list of new technologies". It is suggested that this table actually is a list of areas in which new technologies might be proposed. This issue should be clarified and the appropriate changes should be made as necessary.

This section will be replaced with a statement that says that it is EG&Gs policy to look for new technologies to reduce hazards and keep workers safe.

Responsible:_____Accepted By:_____
Completion Date: / /93

Site Control Plan

The HASP lacks a Section on appropriate site control procedures to be followed during work activities in Building 910. Site Control Programs specify the procedures that will be used to minimize employee exposure to hazardous substances during site operations. At a minimum, the Site Control Program should include:

- Site map
- Site work zones definition
- The use of a "buddy system"
- Site communications including altering means for emergencies
- Standard operating procedures or safe work practices
- Identification of the nearest medical assistance.

A Site Control Section should be added to the HASP to include the above-mentioned elements. Where these requirements are covered elsewhere they need not be repeated.

A Site Control Section will be added to the HASP to cover all of these items.

Responsible:_____Accepted By:_____
Completion Date: / /93

Section 10, Page 54

It is recommended that the following reference be added to this section and that it be used in the revision of this HASP and the development of future HASPs:

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA), DHHS Publication No. 85-115, October 1985.

This reference will be found and in addition the EPA'a Emergency Response Team will be notified to receive the HASP software.

REFERENCES

Standard Operating Safety Guides, U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Hazardous Response Support Division, Environmental Response Team, June 1992.

Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute for Occupational Safety and Health (NIOSH), Occupational Safety and Health Administration (OSHA), U.S. Coast Guard (USCG), and Environmental Protection Agency (EPA), DHHS Publication No. 85-115, October 1985.

29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, 1991.

OSHA Standards and Interpretations, 29 CFR 1910.120, Hazardous Waste Operations and Emergency Response, 1991.

Additional Notes and Action Items

Ventilation of the nitric acid day tank - It was noted that the nitric acid probably will not be required since pond water will not be processed. Is the canopy hood going to be used over the tank? Will it be effective for this purpose? Will monitoring be conducted to avoid worker exposures. EG&G will study this issue and add the necessary information regarding this engineering control if it will be used.

Procedures are reviewed by health and safety and they walk down the job site if it is warranted (ad hoc).

Are the shower and the eye wash outside the building near the nitric acid tank heated so the pipes do not freeze. The building may not operate in the winter so this may or may not be a problem. EG&G will check on this, if it is not going to be used, actions need to be taken to lock it out.

Buddy System - This will be clarified to say that the workers will be in communication through radio and what actions will require a buddy system.